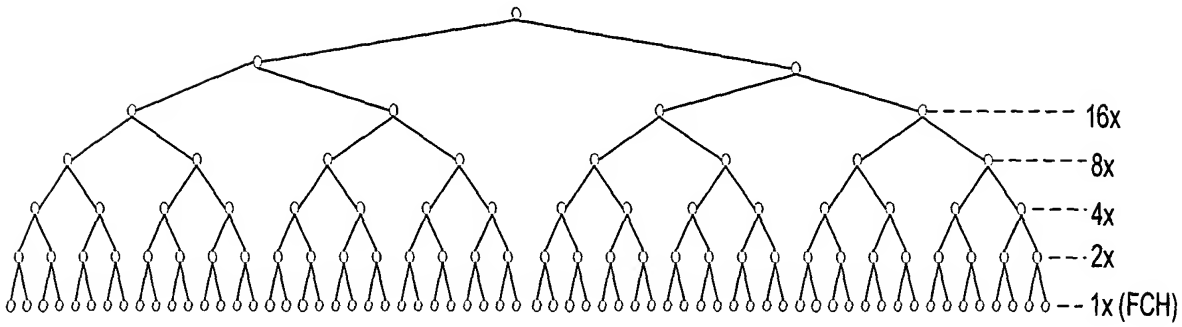

FIG. 1

SU\Channel	1x (k=0)	2x (k=1)	4x (k=2)	8x (k=3)	16x (k=4)
0	$P_{0,0}$	$P_{0,1}$	$P_{0,2}$	$P_{0,3}$	$P_{0,4}$
1	$P_{1,0}$	$P_{1,1}$	$P_{1,2}$	$P_{1,3}$	$P_{1,4}$
2	$P_{2,0}$		$P_{2,2}$		
j	$P_{j,0}$	$P_{j,1}$		$P_{j,3}$	
M	$P_{M,0}$				$P_{M,4}$

$PF_{j,k}$ – Priority Factor of the user j if allocated channel rate level k.

J = 0 ..... M (users)
k = 0, 1, 2, 3, 4 (channel rate level)

FIG. 2

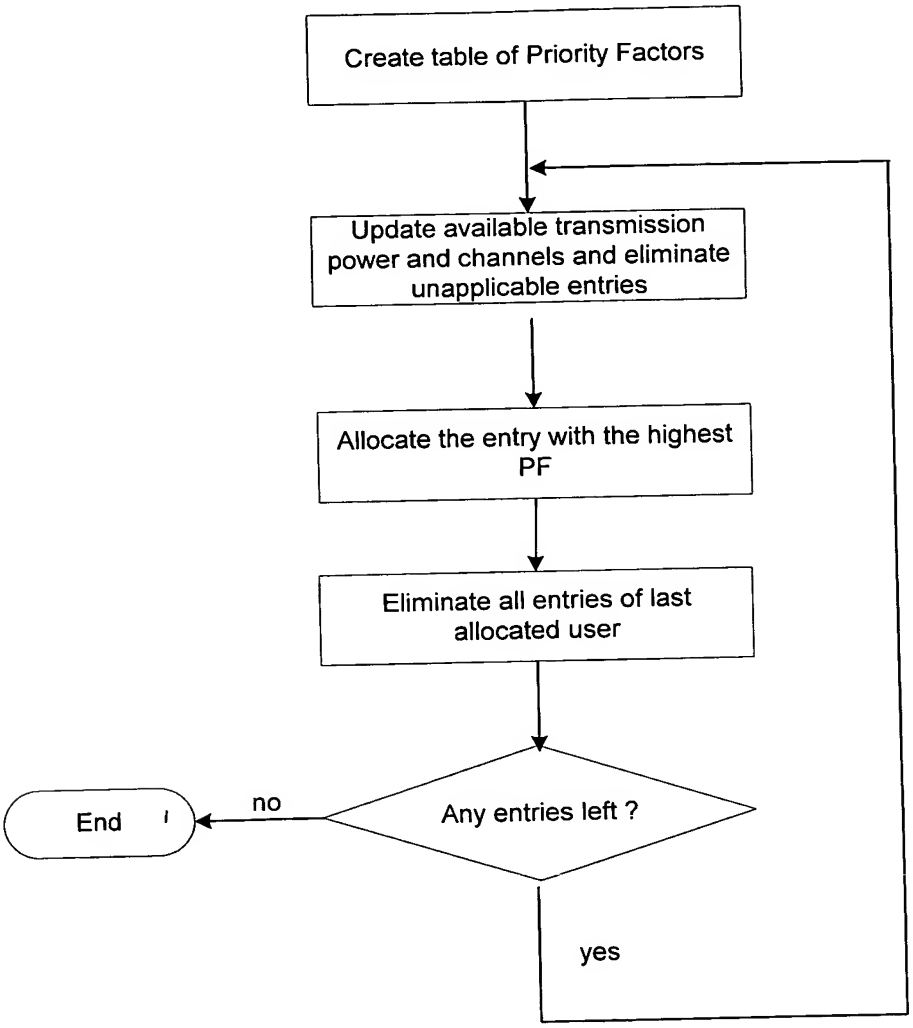
Create table of Priority Factors
Update available transmission power and channels and eliminate unapplicable entries
Allocate the entry with the highest PF
Eliminate all entries of last allocated user
Any entries left ?
no
End
yes

FIG. 3

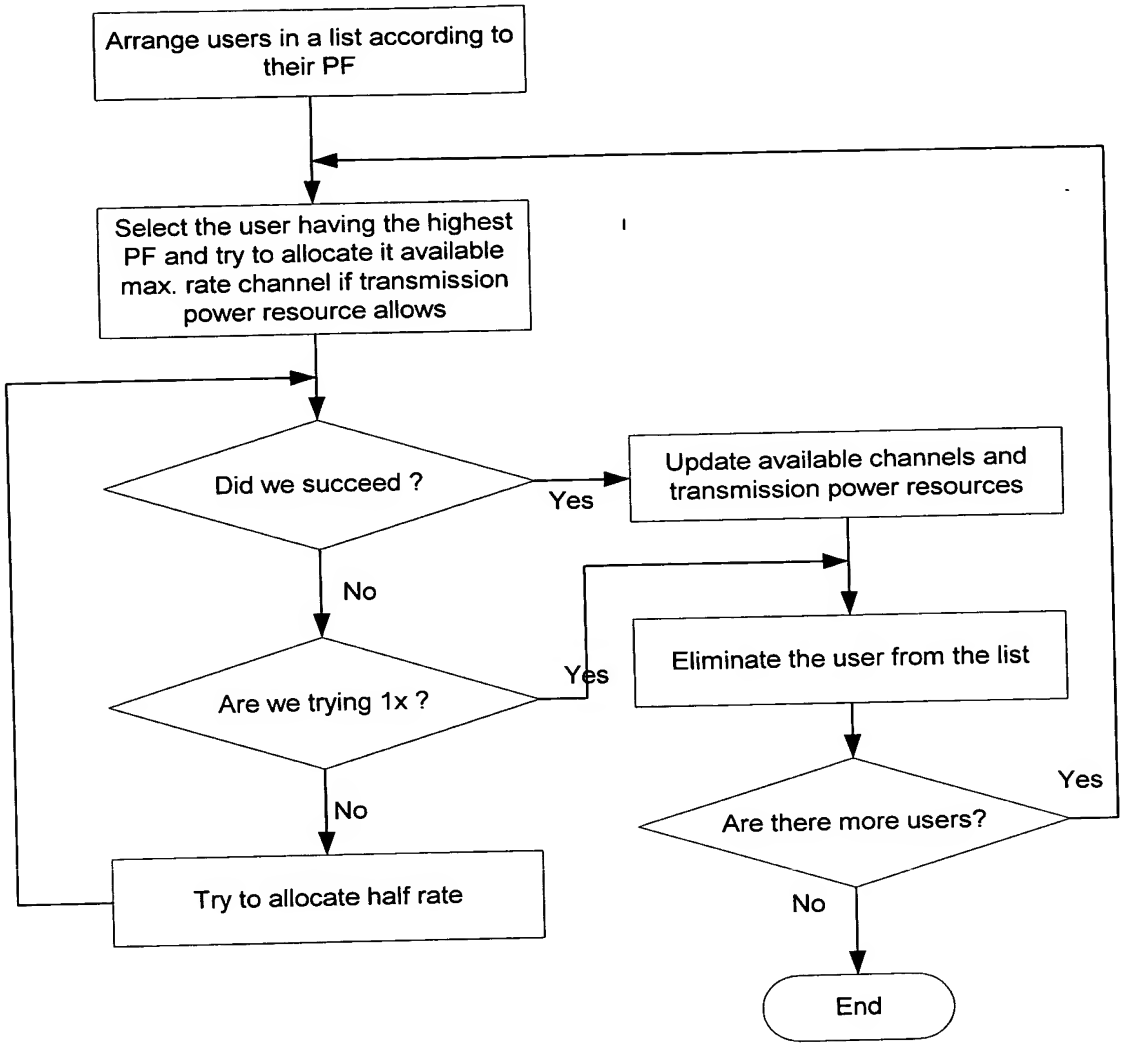
Arrange users in a list according to their PF
Select the user having the highest PF and try to allocate it available max. rate channel if transmission power resource allows
Did we succeed ?
Yes
Update available channels and transmission power resources
No
Are we trying 1x ?
Yes
Eliminate the user from the list
No
Try to allocate half rate
Are there more users?
Yes
No
End

FIG. 4

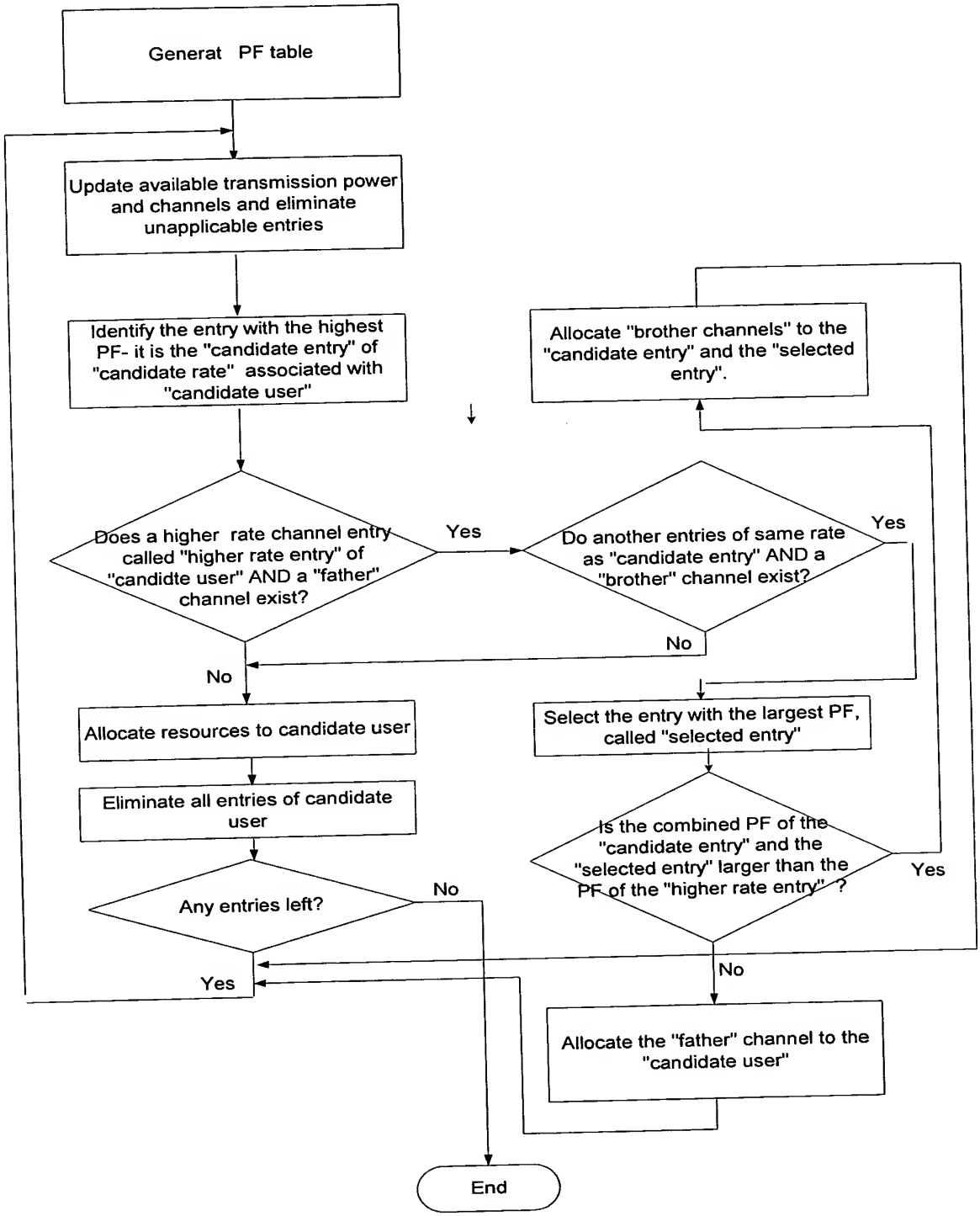
Generat PF table
Update available transmission power and channels and eliminate unapplicable entries
Identify the entry with the highest PF- it is the "candidate entry" of "candidate rate" associated with "candidate user"
Does a higher rate channel entry called "higher rate entry" of "candidte user" AND a "father" channel exist?
Yes
Do another entries of same rate as "candidate entry" AND a "brother" channel exist?
Yes
No
No
Allocate "brother channels" to the "candidate entry" and the "selected entry".
Allocate resources to candidate user
Eliminate all entries of candidate user
Any entries left?
No
Yes
Select the entry with the largest PF, called "selected entry"
Is the combined PF of the "candidate entry" and the "selected entry" larger than the PF of the "higher rate entry" ?
Yes
No
Allocate the "father" channel to the "candidate user"
End

FIG. 5

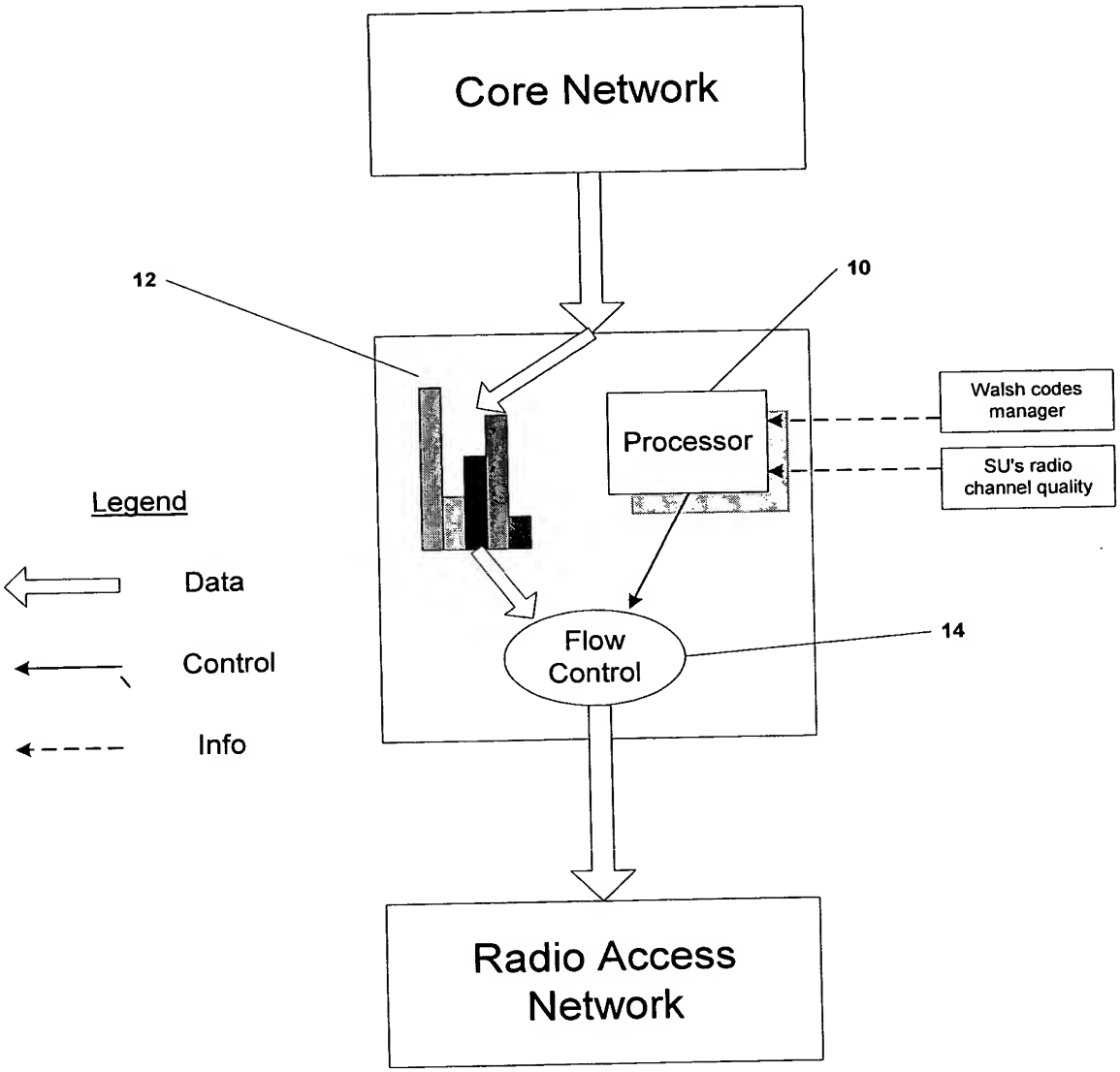
Core Network
12
10
Processor
Walsh codes manager
SU's radio channel quality
Legend
Data
Control
Info
Flow Control
14
Radio Access Network

FIG. 6